



CLSA Approved Project

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Project Title

Clonal hematopoeisis in kidney disease and diabetes

Project Summary

As we age, our cells divide and can acquire DNA mutations. In our white blood cells, the accumulation of certain mutations over time can lead to cancers like leukemia. However, since this is a progressive process, there are individuals whose immune cells have started to acquire DNA mutations but who have no overt cancer. That is not to say that these mutations are benign, however. Some mutations render white blood cells dysfunctional by making them secrete more pro-inflammatory molecules. We know that people with significant proportions of these mutated blood cells have an increased risk of heart disease and early death, but we don't yet understand the full spectrum of harm it can cause. For this project, we will use CLSA data to assess how it contributes to diabetes and chronic kidney disease.

Keywords

CHIP, Kidney disease, Aging, Inflammation